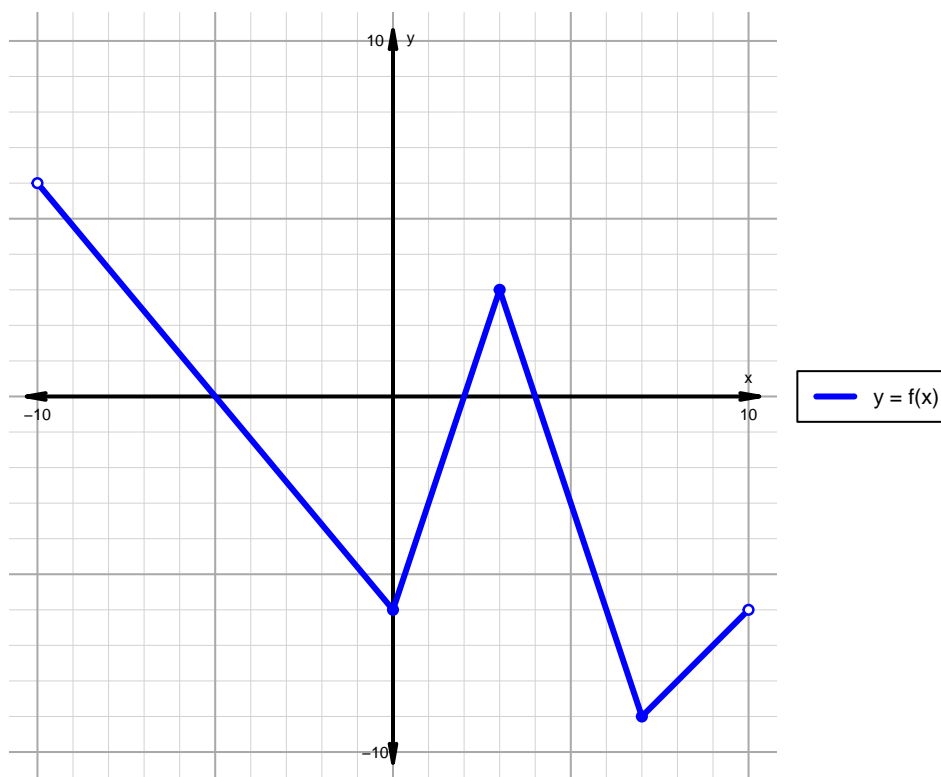


Name: \_\_\_\_\_

Date: \_\_\_\_\_

**Intervals, Transformations, and Slope Practice (version 15)**

1. The function  $f$  is graphed below.

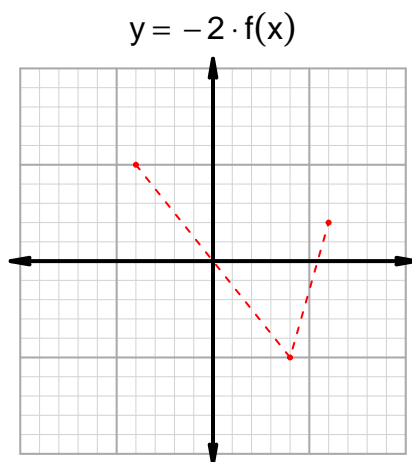
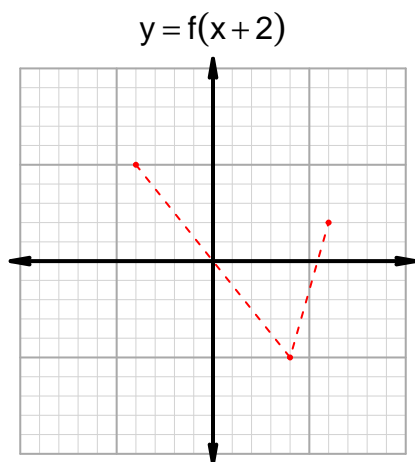
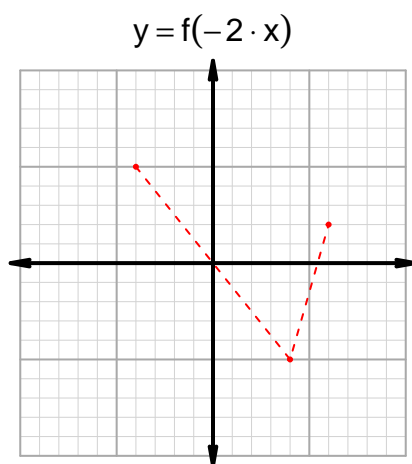
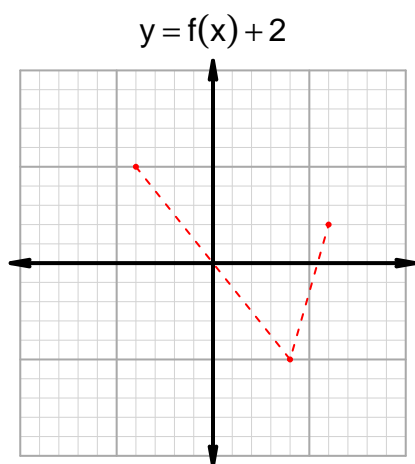


Indicate the following intervals using interval notation. Remember, you can use  $\cup$  between two intervals to indicate the union. Except for range, all intervals will indicate  $x$  values; this is standard.

| Feature    | Where |
|------------|-------|
| Positive   |       |
| Negative   |       |
| Increasing |       |
| Decreasing |       |
| Domain     |       |
| Range      |       |

## Intervals, Transformations, and Slope Practice (version 15)

2. In the four graphs below,  $y = f(x)$  is graphed as a dotted line. With a solid line, please graph the transformations indicated by the equations below.



3. Let function  $g$  be defined by the table below. Use the formula  $\frac{g(x_2) - g(x_1)}{x_2 - x_1}$  to find the average rate of change between  $x_1 = 23$  and  $x_2 = 65$ . Express your answer as a reduced fraction.

| $x$ | $g(x)$ |
|-----|--------|
| 23  | 61     |
| 61  | 65     |
| 65  | 67     |
| 67  | 23     |